

Serial No. 09/538,396  
Group Art Unit: 1638

**Listing of Claims:**

1. (Cancelled)
2. (Previously Presented) A recombinant expression cassette, comprising the polynucleotide of claim 12 operably linked to a promoter.
3. (Previously Presented) A host cell comprising the polynucleotide of claim 12.
4. (Previously Presented) A transgenic plant comprising the polynucleotide of claim 12.
5. (Original) The transgenic plant of claim 4, wherein said plant is a monocot.
6. (Original) The transgenic plant of claim 4, wherein said plant is a dicot.
7. (Previously Presented) The transgenic plant of claim 4, wherein said plant is selected from the group consisting of maize, soybean, sunflower, sorghum, canola, wheat, alfalfa, cotton, rice, barley, and millet.
8. (Previously Presented) A transgenic seed from the transgenic plant of claim 4 wherein the seed comprises the polynucleotide.
- 9-11. (Cancelled)
12. (Currently Amended) An isolated polynucleotide comprising a polynucleotide selected from the group consisting of:
  - (a) a nucleic acid sequence having at least 90% sequence identity over the entire length of SEQ ID NO: 1, as determined by the GAP program

Serial No. 09/538,396  
Group Art Unit: 1638

under default parameters, wherein said sequence encodes a polypeptide ~~involved in double-strand DNA-break repair~~ which binds to a MRE11 polypeptide; and

- (b) a nucleic acid sequence which is fully complementary to the nucleic acid sequence of (a).

13. (Cancelled)

14. (Currently Amended) An isolated polynucleotide comprising a nucleic acid sequence which selectively hybridizes to the full-length complement of SEQ ID NO: 1, under stringent hybridization conditions and a wash in 0.1X SSC at 60°C, wherein stringent hybridization conditions comprise 50% formamide, 1M NaCl, and 1% SDS at 37°C, wherein the polynucleotide encodes a polypeptide ~~involved in double-strand DNA-break repair~~ which binds to a MRE11 polypeptide.

15-17. (Cancelled)

18. (Previously Presented) The isolated polynucleotide of claim 12, wherein the nucleic acid sequence of (a) has at least 95% sequence identity to SEQ ID NO: 1.

19. (Previously Presented) The isolated polynucleotide of claim 12, wherein the polynucleotide is SEQ ID NO: 1.

20. (Currently Amended) An isolated polynucleotide comprising a polynucleotide selected from the group consisting of:

- (a) a nucleic acid sequence encoding a polypeptide having at least 90% sequence identity over the entire length of SEQ ID NO: 2, as

Serial No. 09/538,396  
Group Art Unit: 1638

determined by the GAP program under default parameters, wherein the encoded polypeptide ~~is involved in double-strand DNA break repair~~ binds to a MRE11 polypeptide; and,

(b) a nucleic acid sequence which is fully complementary to the nucleic acid sequence of (a).

21. (Previously Presented) The isolated polynucleotide of claim 20, wherein the nucleic acid sequence of (a) encodes a polypeptide having at least 95% sequence identity to SEQ ID NO: 2.
22. (Previously Presented) The isolated polynucleotide of claim 20, wherein the polynucleotide encodes the polypeptide of SEQ ID NO: 2.
23. (Previously Presented) A recombinant expression cassette comprising the polynucleotide of claim 20 operably linked to a promoter.
24. (Previously Presented) A host cell comprising the polynucleotide of claim 20.
25. (Previously Presented) A host cell of claim 24, wherein the host cell is a plant cell.
26. (Previously Presented) A transgenic plant comprising the polynucleotide of claim 20.
27. (Previously Presented) The transgenic plant of claim 26, wherein said plant is a monocot.
28. (Previously Presented) The transgenic plant of claim 26, wherein said plant is a dicot.

Serial No. 09/538,396  
Group Art Unit: 1638

29. (Previously Presented) The transgenic plant of claim 26, wherein said plant is selected from the group consisting of maize, soybean, safflower, sunflower, sorghum, canola, wheat, alfalfa, cotton, rice, barley, and millet.
30. (Previously Presented) A transgenic seed from the transgenic plant of claim 26 wherein the seed comprises the polynucleotide.
31. (Previously Presented) A recombinant expression cassette comprising the polynucleotide of claim 14 operably linked to a promoter.
32. (Previously Presented) A host cell comprising the recombinant expression cassette of claim 31.
33. (Previously Presented) A host cell of claim 32, wherein the host cell is a plant cell.
34. (Previously Presented) A transgenic plant comprising the recombinant expression cassette of claim 31.
35. (Previously Presented) The transgenic plant of claim 34, wherein said plant is a monocot.
36. (Previously Presented) The transgenic plant of claim 34, wherein said plant is a dicot.
37. (Previously Presented) The transgenic plant of claim 34, wherein said plant is selected from the group consisting of maize, soybean, safflower, sunflower, sorghum, canola, wheat, alfalfa, cotton, rice, barley, and millet.

Serial No. 09/538,396  
Group Art Unit: 1638

- 38. (Previously Presented) A transgenic seed from the transgenic plant of claim 34 wherein the seed comprises the recombinant expression cassette.
- 39. (Cancelled)